

Structural Vulnerability Assessment

The continued use of existing structures is of great importance because the built environment is a huge economic and political asset, growing larger every year. SGS is increasingly called upon to devise ways for extending the life of structures whilst observing tight cost constraints. SGS can apply specific methods for assessment in order to save structures and to reduce a client's expenditure.

Robust, Resilient Structures

For construction sites, each stage of activity is critical and contributes to deliver a strong and durable structure. These include quality of materials used, alignment with design specifications, compliance with standards amongst several others. It is crucial for construction companies to periodically assess the integrity of the structural components and equipment being used on the construction site to ensure safe operations, as well as preemptively detect any defects before serious damage can occur.

Non-Destructive & Destructive Testing

Our Non-Destructive Testing (NDT) & Destructive Testing (DT) services offer you complete or sample examination of your assets, using well-designed procedures and highly trained and experienced NDT inspectors. As a result, we can provide you with complete and valuable data, enabling you to make informed asset management decisions.

Types of NDT / DT Techniques

- Rebound Hammer Test - RH
- Ultrasonic Pulse Velocity Test
- Ferro Scanning / Cover Meter Test
- Core Extraction Test
- Half-cell Potential Measurement Test
- Cut and Pull Out (CAPO) Test
- Chemical Analysis of Concrete
- Concrete Resistivity Test
- Water Permeability & Moisture Content Test
- Leeb Hardness & Grade Verification Test
- MPI, UT, DPT of welds & Torqueing check of bolts

Non-Destructive Testing (NDT) services offer you significant advantages over conventional methods. These include:

- Coverage: Large areas can be assessed in a short time.
- Less Invasive, hence cost-effective: The need for destructive testing (eg. core drilling, clearing reinforcement), becomes minimal and can be limited to targeted spots.

Structural Health Assessment

Over time, assets are prone to wear and tear, degradation. Defects such as presence of cracks, leaks, detachments of the protective layer in reinforced concrete elements, corrosion of metal elements, deflections and deviations from the planned position, the state of joints and joints, etc.) can develop unnoticed and worsen over time. Our services can help to:

- Assess the structural soundness using Non-Destructive & Semi-Destructive tests, independent analysis and design assessment of built structures.
- Assess the structure for change in occupancy, future expansion, proposed modifications as per latest standards.
- Assess the structural adequacy related to seismic forces as per latest standards.
- Assessment of structural damage caused by fire/ natural calamities.
- Working out appropriate restoration and retrofitting schemes to make the structure serviceable.

Other Services for the Construction Industry

- Project Management Consultancy
- Design Review Services
- Root Cause Failure Analysis
- Building Information Modelling (BIM)
- Construction Material Lab Testing
- Real-time Structural Health Monitoring

We are SGS – the world's leading testing, inspection and certification company. We are recognized as the global benchmark for quality and integrity. Our 96,000 employees operate a network of 2,600 offices and laboratories, working together to enable a better, safer and more interconnected world.



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& ENVIRONMENT

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